

Application Serial Number: 09/885,408
In response to Office Action dated September 29, 2003

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-13 are presently active in this case; Claims 1, 3-6, and 8-13 having been amended and Claims 2 and 7 canceled by way of the present amendment.

In the outstanding Office Action, the specification was objected to for failure to establish proper antecedent basis for Claims 11-13, for failing to describe claimed steps, and informalities; the abstract was objected to as not descriptive of the invention; Claims 1 and 11-13 were objected to for minor informalities; Claims 11-13 were rejected under 35 U.S.C. § 112, first paragraph; Claims 4 and 5 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,844, 918 to Kato; Claims 1-3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,844,918 to Kato in view of International Patent No. WO98/58468 to Tanaka et al. (hereafter “WO Tanaka et al.”); Claims 6-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kato in view of U.S. Patent No. 5,5781,542 to Tanaka et al. (hereafter “U.S. Tanaka et al.”); and Claims 12-13 were rejected as unpatentable over WO Tanaka et al..

First, Applicants respectfully request that the Examiner consider whether a personal interview with Applicants’ representative will facilitate the Examiner’s understanding of this case and Applicants’ position on the outstanding rejection. Applicants further request the Examiner to contact the Applicants’ representative at the contact information below before acting on this case to inform Applicant’s representative of whether a personal interview will expedite issuance of a patent in this case and, if so, to schedule such an interview.

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interview will expedite issuance of a patent in this case and, if so, to schedule such an interview.

Applicants wish to point out that the references cited in the IDS filed September 5, 2003 have not yet been acknowledged. Applicants respectfully request that such references be considered and an initialed copy of the PTO form 1449 be returned with the next official communication from the PTO.

With regard to the objection to the specification as not providing proper antecedent basis for Claims 11-13 and the rejection of Claims 11-13 as failing to comply with the enablement requirement, Applicants respectfully traverse this objection and rejection. Specifically, Claims 11-13 recite a "base station" in relation to a "mobile station" and "host station." These terms are used throughout the specification and specifically appear in abbreviated form in the in Figures 9-11. Moreover, Claims 11-13 recite a base station having generic "parts" that perform specific functions for implementing the disclosed invention. While the term "part" is not specifically disclosed in the specification, one of ordinary skill in the art of mobile communications would be able to identify that the description of Figures 9-11 provides antecedent basis for the parts recited in Claims 9-12.

Further, "the test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosure in the patent coupled with information known in the art without undue experimentation."¹ Here, one of ordinary skill in the art could make the claimed invention without undue experimentation because, as to claim 11, Steps S114 and S115/S124 and 5125 of FIG. 9 correspond to the "part generating ...";, Steps S117/127

¹ MPEP 2164.01, citing United States v. Telecommunications, Inc. 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988).

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correspond to "part receiving ..."; and so forth, for example. As to claim 12, Steps S152/S162 of FIG. 10 correspond to "part transferring ..."; Step S153/S163 correspond to "part receiving ..."; and so forth. As to claim 13, Steps S192/S202 in FIG. 11 correspond to "part transferring ..."; Steps S193/S203 correspond to "part receiving . . . "; and so forth. Thus, it is clear that the features recited in claims 11-13 are fully supported and enabled by the originally filed specification/drawings, which provide proper antecedent basis for these claims.

In response to the objection to the specification for failing to describe claimed steps and other informalities, the specification has been amended to correct the noted informalities and, therefore, the objection is believed to be overcome.

In response to the objection to Claims 1 and 11-13 and the objection to the Abstract, Claims 1 and 11-13 have been amended to correct the noted informalities, and the title of the invention and Abstract have been amended to clarify that the present invention relates to a method and system. Therefore, the objection to the claims and Abstract are believed to be overcome.

Turning now to the merits, in order to expedite issuance of a patent in this case, Applicants have now amended Claims 1, 4, 6 and 9 to clarify the patentable features of the claimed invention over the cited references.

Specifically, Claim 1, as amended, recites a communication method including "c) reporting from the reception station to the transmission station the reliability of the received packet, utilizing the ACK/NACK signal by using not less than three levels, and d) determining based on the reliability of said received packet whether or not said received packet should be stored to be combined with a re-transmission packet, when said received

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packet includes an error.” Also recited is “e) performing re-transmission control based on the determination made in said step d.” Thus, Claim 1 has been amended to clearly recite how the reporting of reliability information by at least three levels is utilized. As described in Applicants’ specification, the reporting of reliability information by at least three levels is advantageous over the conventional way by two levels (ACK/NACK) because, for example, it allows reduced storage in a storage buffer.²

In contrast, the cited references do not teach or suggest the features of claim 1. The Official Action acknowledges that Kato does not teach obtaining and reporting reliability, but cites the Japanese language PCT publication WO Tanaka et al. as teaching this feature. In this regard, Applicants note that the Official Action cites language purported to be from the WO Tanaka et al. reference. However, the cited language is not in the English Abstract of WO Tanaka et al., which merely discloses that error correction decoding is performed by using the second of two headers when error correction is impossible from the first header, or using both headers together when error correction is impossible from the second header. The Abstract of Tanaka simply does not mention reporting from the reception station to the transmission station the reliability of the received packet, utilizing the ACK/NACK signal by using not less than three levels, or determining based on the reliability of said received packet whether or not said received packet should be stored to be combined with a re-transmission packet, when said received packet includes an error as now recited in Claim 1.

Moreover, Applicants’ review of the Japanese language of WO Tanaka et al. indicates that the main text of this reference also does not disclose the above-noted limitations of Claim

² Applicants’ specification at p. 14, lines 17-21.

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1. In this regard, Applicants respectfully request that, if the Japanese text is relied on in future Official Actions, an English translation of this reference be provided in accordance with MPEP 706.02 (at page 700-200). By proper citation to an English translation of this reference in any future office action, Applicants can better understand the nature of the rejection based on the WO Tanaka et al. reference.

For the reasons discussed above, Claim 1, and Claim 3 which depends from Claim 1, patentably define over the cited references.

With regard to Claim 4, this Claim recites “b) storing a history of the received ACK/NACK signals, and performing control of a transmission parameter utilizing at least one ACK/NACK signal and a transmission power control signal at the transmission station, and c) performing re-transmission control based on the transmission parameter.” Thus, Claim 4 has been amended to recite storing a history of the received ACK/NACK signals and to clarify that control of the transmission parameter is based on an ACK/NACK signal and a power control signal. While Kato et al. discloses use of ACK/NACK signal as part of an Automatic Repeat Request as pointed out in the Office Action, Kato et al. is completely silent as to storing a history of the ACK/NACK signals, as now recited in Claim 4.

Moreover, Kato et al. does not teach or suggest controlling a transmission parameter based on the ACK/NACK signal and a transmission power control signal, as originally claimed in Claim 4. In this regard, Applicants respectfully note that the Official Action inadvertently failed to address this limitation of original Claim 4. Applicants have now amended Claim 4 to further clarify the “controlling a transmission parameter” limitation.

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Thus Claim 4, as amended, and Claim 5 which depends on Claim 4, patentably define over Kato et al.

Claim 6, as amended, recites that “b) when uplink site diversity reception is performed such that a plurality of reception stations simultaneously receive a signal transmitted from a transmission station, the plurality of reception stations generating the ACK/NACK signals, and transmitting them to the transmission station and a host station of the plurality of reception stations.” Also recited in Claim 6 is that “c) said host station of the plurality of reception stations receiving the ACK/NACK signals from the plurality of reception stations, and, upon receiving more than n ACK signals, where n denotes an integer not less than 1, generating the ACK signal so as to transmit it to the respective reception stations” and “d) said transmission station performing re-transmission control utilizing the ACK/NACK signals from the plurality of reception stations.” As described in Applicants’ specification, since the plurality of reception stations generate ACK/NACK signals and transmit them to the transmission station and the host station as recited in Claim 6, the host station and transmission station can independently determine whether a packet error has occurred.³

As acknowledged by the Official Action, Kato et al. does not disclose a plurality of reception stations. Thus, Kato et al. does not disclose a plurality of reception stations generating the ACK/NACK signals, and transmitting them to the transmission station and a host station of the plurality of reception stations. While U.S. Tanaka et al. teaches a plurality of base stations as noted in the Official Action, this reference does not teach or suggest that a plurality of ACK/NACK signals are sent to the transmission station and host station. It is this

³ Applicants’ specification at page 25, line 1-4.

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feature that allows the host station and transmission station can independently determine whether a packet error has occurred. This feature is not taught by the combination of Kato and U.S. Tanaka et al. In addition, neither Kato et al. nor U.S. Tanaka et al. teach the feature of the host station itself generating an ACK signal based on n number of ACK signals received from the plurality of reception stations as now claimed in amended Claim 6.

Thus, Claim 6 patentably, and Claims 7-8 which depend from Claim 6, define over Kato and U.S. Tanaka et al.

With regard to Claim 9, this claim has been amended to recite "the reception station obtaining reliability of a received packet upon demodulating the received packet, and reporting to the transmission station and a host station of the plurality of reception stations the reliability of the received packet with the ACK/NACK signal by not less than three levels." As discussed above with respect to Claim 6, the combination of Kato et al. and U.S. Tanaka et al. does not disclose a plurality of reception stations generating the ACK/NACK signals, and transmitting them to the transmission station and a host station of the plurality of reception stations. Moreover, as discussed with respect to Claim 1, Kato does not disclose utilizing the ACK/NACK signal by using not less than three levels. Thus, Claim 9 also patentably defines over the cited references.

Claim 10 recites a downlink diversity scheme wherein "c) when a host station of the plurality of base stations receives the ACK/NACK signals via the plurality of base stations which include not less than n (≤ 1) ACK signals, determining that the plurality of base stations performed proper reception, then re-transmission control being performed at the plurality of base stations." As the plurality of reception stations which perform downlink site

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diversity perform transmission according to the same ACK/NACK (RNC) signal in Claim 10, the transmission station can obtain a site diversity effect. As discussed with respect to Claim 6 above, neither Kato et al. nor U.S. Tanaka et al. teach the feature of the host station itself generating an ACK signal based on n number of ACK signals received from the plurality of reception stations. Thus, Claim 10 also patentably defines over Kato et al. and U.S. Tanaka et al.

Claim 11 recites a base station having "a part generating the ACK/NACK signal and transmitting it to the mobile station and to a host station." As discussed above with respect to Claims 6 and 9, the combination of Kato et al. and U.S. Tanaka et al. does not disclose a generating the ACK/NACK signals, and transmitting them to the transmission station and a host station of the plurality of reception stations. Thus, Claim 11 also patentably defines over the cited references.

Claims 12 and 13 generally recite a base station having a transfer feature. Specifically, Claim 12 is directed to the base station transferring packets to a host, and receiving ACK/NACK signal from the host and transferring it. Similarly, Claim 13 is directed to the base station receiving ACK/NACK signal from a mobile station and transferring it to a host, and receiving a signal concerning the ACK/NACK signal from the host. The outstanding Official Action does not specifically address these limitations, but rather generally states that these claims are taught by the WO Tanaka reference. As noted above with respect to Claim 1, Applicants have not received a translation of this reference. However, it is Applicants' position that the features of the present invention that a host station performs transfer error control operation based on states as to how a plurality of

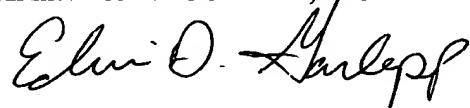
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receiving stations receive information is neither disclosed nor suggested by any cited references. Thus, Claims 12 and 13 also patentably define over the cited references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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